



## **JEODI WORKSHOP: ARCTIC SITE SURVEY CHALLENGES**

**W. Jokat**(1), J. Backman(2), Y. Kristoffersen(3), Mikkelsen, N.(4), J. Thiede(1)

(1)Alfred Wegener Institute(jokat@awi-bremerhaven.de/+49-471-4831-1211) (2)University of Stockholm, (3)University of Bergen (4)Greenland and Danish Geological Survey

In past decades the geoscientific activities in the High Arctic were rather low compared to other areas on the globe. The remoteness of the region and the difficult logistical conditions made Arctic research very expensive and the results unpredictable.

In the late 80's this situation changed to the better since modern research icebreaker became available to the scientific community. These research platforms provided opportunities in terms of equipment, which was standard in other regions. Where necessary techniques were adapted allowing to conduct the experiments even in difficult ice conditions, e.g. multi-channel seismic. In the last decade the Arctic Ocean were identified to play a key role in our understanding of the Earth's climate. An urgent need for scientific deep drill holes in the central Arctic was obvious to better understand the climate evolution of the past in a regional and global sense. However, to select and prepare the drilling experiments sufficient site survey data, especially seismic data, are needed.

These problems were addressed during a recent JEODI workshop in Copenhagen. The participants recommended dedicated expeditions to the Alpha-Mendelev Ridge, the Lomonosov Ridge and the Gakkel Ridge to provide a critical amount of geophysical data for future drilling efforts. An international expedition to the Alpha-Mendelev Ridge was proposed as part of the International Geophysical Polar Year 2006/07 to investigate the least known oceanic ridge of the world's ocean.

Besides scientific targets in the High Arctic it became obvious during the workshop that in the marginal seas and plateaux sufficient geophysical data exist to submit drilling proposals like for the Yermak Plateau, the Chukchi Plateau/Northwind Ridge and Laptev Sea continental margin. These proposals would perfectly complement the highly ranked drilling proposal on Lomonosov Ridge, which hopefully can be drilled in 2004 within the ODP/IODP programme.

This presentation will provide information on the major results of this workshop as well as the planned activities in the next decade.